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8 Broadcast Operation

Recording Broadcasts

Use the following steps to prepare to record a broadcast. Do this at least 1 hour before the broadcast is scheduled to begin.

1. Turn on the TVRO system.

2. Select the desired satellite signal.

3. Optimize your receiver and monitor and/or TV as described in *Chapter 3, Receivers.*

4. Ensure that the Videocassette Recorder (VCR) to be used for recording the broadcast is properly connected to the receiver and is turned on.

5. Insert the videocassette into the VCR.

6. Record the program using the manual or automatic procedures for your VCR.

Conducting Interactive Programming

Overview

Interactive programming is programming that provides one-way video and two-way audio audience participation, with live programs originating in the USIA Washington, D.C. studios and broadcast via satellite to one or more USIA sites throughout the world. At those sites set up for interactive participation, participants may ask questions or make comments when called on by the program host.

Control Room / Studio Arrangements

Figures 8.1, 8.2, and 8.3 illustrate some possible control room/studio arrangements for interactive programming.
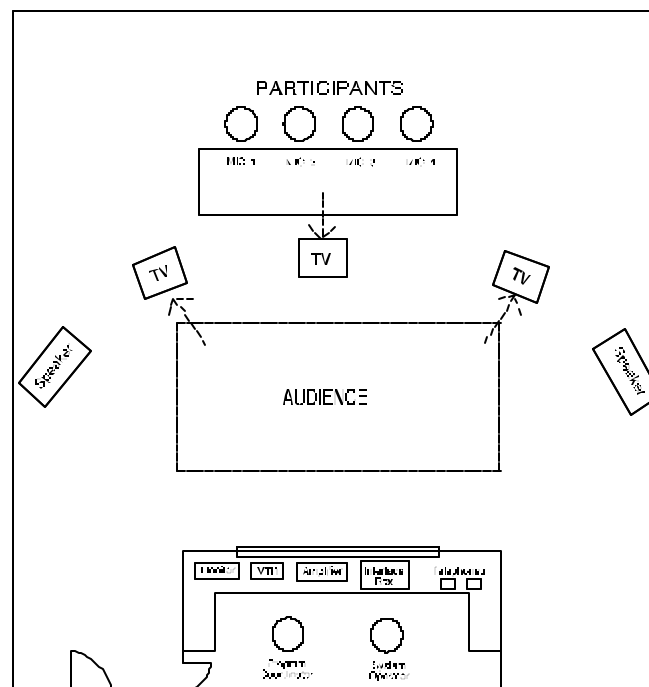
Figure 8.1, Interactive Programming, Room Arrangement A
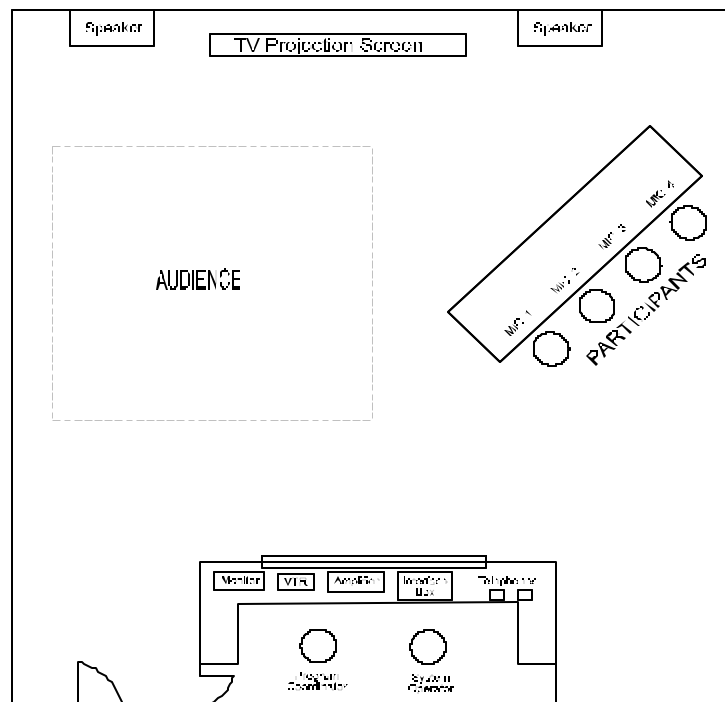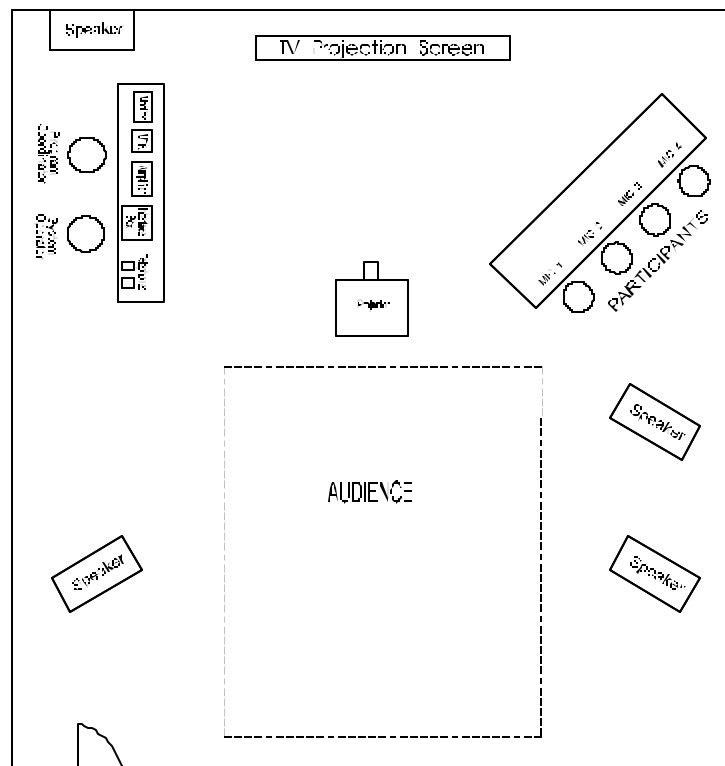
Figure 8.2, Interactive Programming, Room Arrangement B

Figure 8.3, Interactive Programming, Room Arrangement C

Using Sony Porta-Pac Interactive Audio

Overview

The SONY Porta-Pac is an audio system designed by USIA TV Engineering and custom-built for USIA by the SONY Corporation, Japan.

The SONY Porta-Pac units may be placed side-by-side, on top of one another, or rack mounted, depending on available space. The ideal location for the units is within a separate control room, adjacent to the studio where the program participants and the audience sit during the program. A separate control room allows the system operator and/or program coordinator to talk to Washington, D.C. during the program without distracting the audience. The control room should have a window so the system operator can see the participants in the studio. If a separate room is not available, the units can be placed within the studio.

Components

Figures 8.4 through 8.7 show the Sony Porta-Pac. The SONY Porta-Pac consists of the following units.

- 1 control power amplifier (Amplifier);

- 1 microphone selector/telephone interface box (Interface box); and

- Four microphone/headphone boxes.

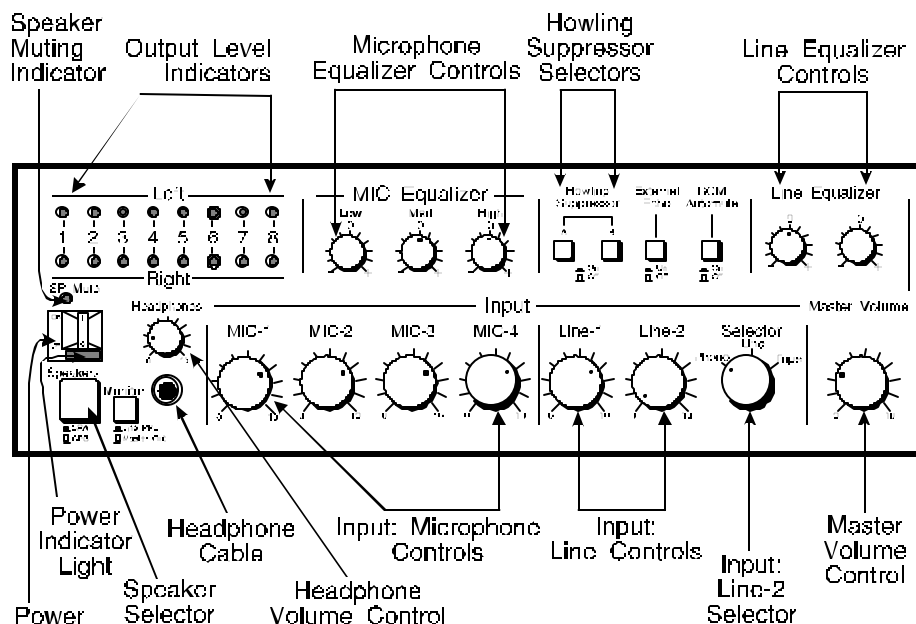**Figure 8.4, SONY Porta-Pac Amplifier, Front Panel**

Figure 8.5, SONY Porta-Pac Amplifier, Rear Panel

Mode:
Stereo/Mono

Voltage
Selector

Microphone Inputs   Speaker Outputs

Record: Out 1
Record: Out 2
Line 1 Inputs

Power Amplifier Input:
Exterior/Inside

AC
Power
Input
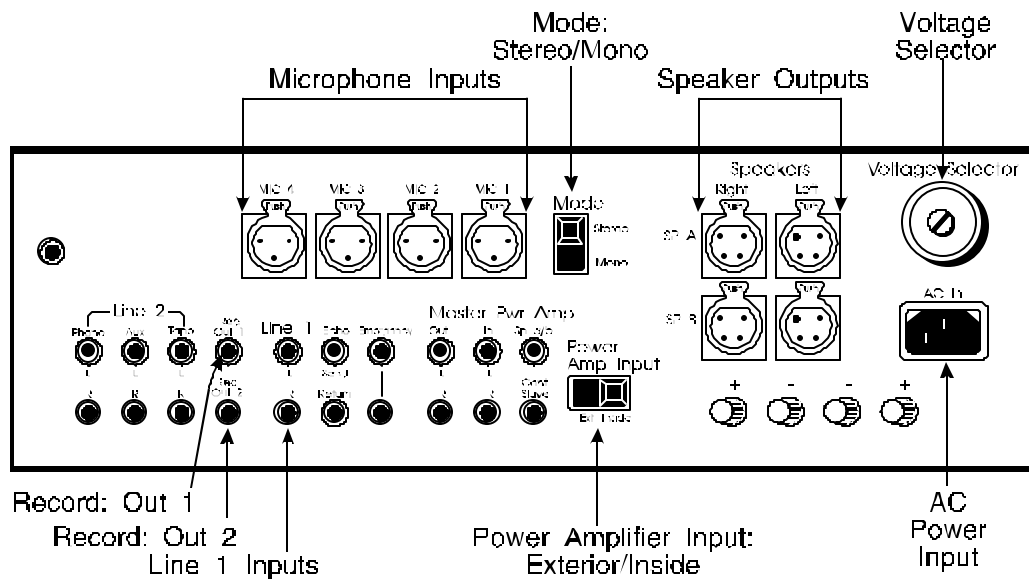
Figure 8.6, SONY Porta-Pac Interface Box, Front Panel

Input Selector: Satellite\Phone
Monitor: Satellite\Phone

Phone 2/Send

Power
Indicator Light

Phone 1/Hybrid Receive
(program line)

Mode Select Voltage Unit Meter

Headphone
Cable

Microphone
Select

Send Level
Control

Test

Power

Headphone
Volume Control

Balance
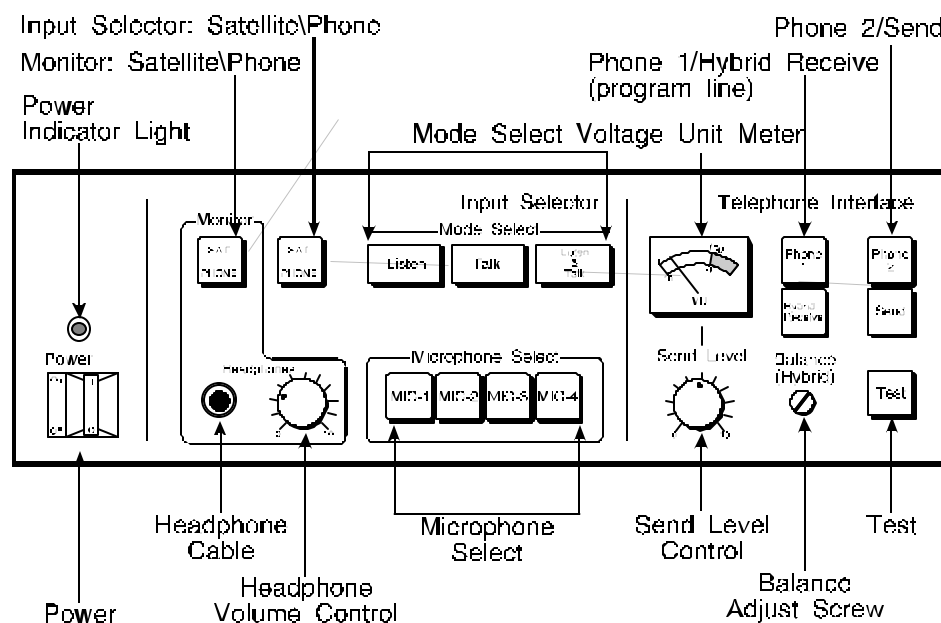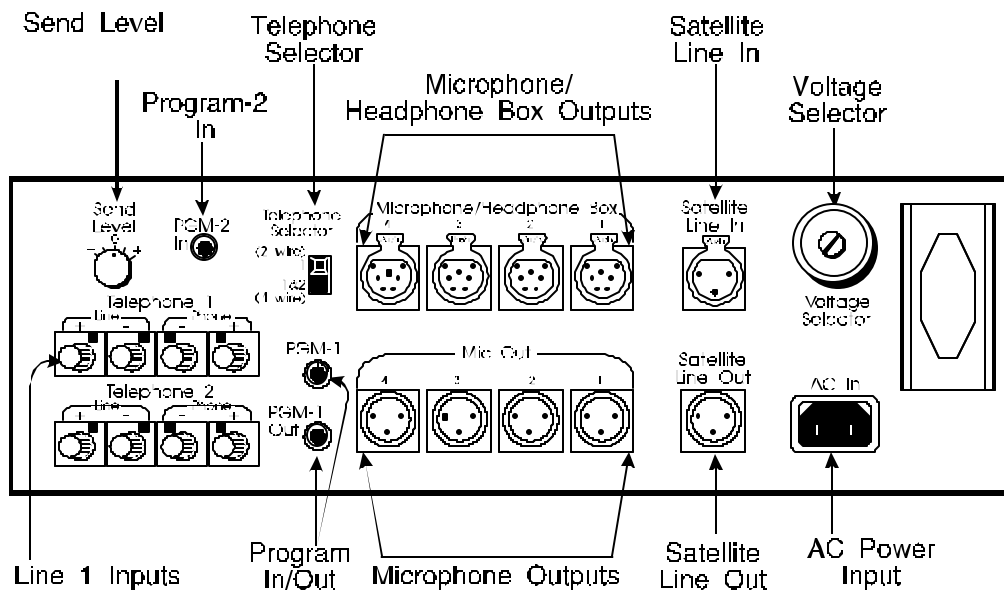Adjust Screw

Figure 8.7, SONY Porta-Pac Interface Box, Rear Panel

Hookup

Hookup of the SONY Porta-Pac is accomplished by connecting the following:

- Telephone lines;

- Communication cables; and

- Power cables.

The SONY Porta-Pac requires 2 dedicated telephone lines with the telephones located next to the SONY Porta-Pac units.

- The Coordination (Coord) Line; and

  The coord line does not connect to the SONY equipment. The coord telephone is used by the site program coordinator to talk directly to the Washington, D.C. program coordinator before and during the interactive program.

- The Program Line.

  The program line connects to the SONY equipment at the Interface box. It transfers the participants' questions and comments back to Washington, D.C.

Complete the following procedures to hookup the Sony Porta-Pac.

1. Connect the 2 wires of the program line telephone cable to the Telephone using line "+" and line "-" terminals on the rear panel of the Interface box.

2. Connect the 2 wires of cable from the program telephone to the Telephone using phone "+" and phone "-" terminals on the rear panel of the Interface box.

3. Move the Telephone Selector switch on the rear panel of the Interface box to 2 Wire.

4. Use the 4 Wire position only when you are directed to do so by Washington, D.C.

5. Test the telephone. You should hear a dial tone.

6. If you do not hear a dial tone, reverse the wires connected to the Telephone phone "+" and phone "-" terminals. You should now hear a dial tone.

7. On the rear panel of the Amplifier, move the Mode switch to Stereo.

8. On the rear panel of the Amplifier, move the Power Amp Input switch to Inside.

9. Connect all of the communication cables. They are color coded and numbered for easy identification. Table 8.1, SONY Porta-Pac Cable Specifications, lists each communication cable; its cable number, cable name, cable length, cable color, interface unit rear panel terminal, amplifier unit rear panel terminal, and notes. Each cable must be connected exactly as shown in Table 8.1.

Do not connect the SONY Porta-Pac units to AC power until you have checked the voltage selector switch setting on:

- The rear panel of the Amplifier;

- The rear panel of the Interface box; and

- The audio/video distribution amplifier.

10. Turn each voltage selector switch to match the power line voltage at your site.

The Interface box and the amplifier are wired for 110V AC operation. Do not plug them into any outlet until you verify that the outlet voltage is correct and that a proper circuit ground, other than the circuit ground used by the antenna, is used.

11. Plug the Interface box power cord into the AC In terminal on the rear panel of the Interface Box. Plug the other end of this cord into a wall or terminal strip terminal.

12. Plug the power cord into the AC In terminal on the rear panel of the Amplifier. Plug the other end of this cord into a wall or terminal strip.

TABLE 8.1, SONY PORTA-PAC CABLE SPECIFICATIONS

CABLE NUMBER	CABLE NAME	CABLE LENGTH	CABLE COLOR	INTERFACE UNIT, REAR PANEL TERMINAL	AMPLIFIER UNIT, REAR PANEL TERMINAL	NOTES
V1	UGC-5	5 m	ORANGE			Video from satellite
V2	UGC-2	2 m	YELLOW			Spare video
V3	UGC-2	2 m	VIOLET			Spare video
V4	UGC-2	2 m	BLUE			Spare video
A1	EC-1XLR	1 m	RED	MIC OUT: 1	MIC 1	Audio
A2	EC-1XLR	1 m	YELLOW	MIC OUT: 2	MIC 2	Audio
A3	EC-1XLR	1 m	BLUE	MIC OUT: 3	MIC 3	Audio
A4	EC-1XLR	1 m	GRAY	MIC OUT: 4	MIC 4	Audio
A5	EC-5XLR	5 m	WHITE	Satellite Line In		Audio from system receiver or distribution amplifier IF output terminal
A6	XLR-F-phone	1 m	BLACK	Satellite Line Out	Line 1 L	Audio
A7	(¼)RK-40C	1 m	VIOLET	PGM-1 OUT		Spare audio
A8	RK-50A	1 m	BLACK			Spare audio
A9	(¼)RK-40C	1 m	RED	Pgm-1 In	Rec Out 1	
A10	(¼)RK-40C	1 m	YELLOW	Pgm-2 In	Rec Out 2	
M1	Multi-cable	10 m	BROWN	Headphone Box 1		Microphone's Input Selector
M2	Multi-cable	10 m	ORANGE	Headphone Box 2		Microphone's Input Selector
M3	Multi-cable	10 m	GREEN	Headphone Box 3		Microphone's Input Selector
M4	Multi-cable	10 m	VIOLET	Headphone Box 4		Microphone's Input Selector
M5	CCQ-10AR	10 m	BLACK			Spare audio
M6	RK-10-4P	10 m	BLACK		Speaker A Left	To loudspeaker SP-In terminal
M7	RK-10-RP	10 m	BLACK			From loudspeaker SP-Out terminal to next loudspeaker Sp-In terminal
M8	RK-10-RP	10 m	BLACK			From loudspeaker SP-Out terminal to next loudspeaker Sp-In terminal

CABLE NUMBER	CABLE NAME	CABLE LENGTH	CABLE COLOR	INTERFACE UNIT, REAR PANEL TERMINAL	AMPLIFIER UNIT, REAR PANEL TERMINAL	NOTES
M9	RK-10-RP	10 m	BLACK			From loudspeaker SP-Out terminal to next loudspeaker Sp-In terminal
M10-1	Tele-cable	5 m	GRAY			Spare telephone cable
M10-2	Tele-cable	5 m	GRAY			Spare telephone cable

Tests

Most of the system operation can be tested without using the satellite. You will need the help of two assistants to complete the testing. In the first test, confirm that the interactive audio equipment is connected and working properly. In the second test, confirm that your TVRO system is on and receiving a program

1. On the front panel of the Amplifier, press the Power switch.

    The Power Indicator light turns on.

2. Press the red Speaker selector switch.

    The loudspeakers turn on.

3. Move the following knobs to 7:

    - The Headphones volume control knob;

    - The Input MIC-1, MIC-2, MIC-3, MIC-4 control knobs; and

    - The Input Line-1 control knob.

4. Move the Master Volume control knob to 2 or 3.

5. Move the 3 MIC Equalizer control knobs and the 2 Line Equalizer control knobs to 0.

6. Move the Input Line-2 control knob to 0.

7. Move the Input Line-2 Selector knob to Phono.

8. Set the following switches to off:

    - The A and B Howling Suppressor switches;

    - The External Echo switch; and

    - The BGM Automute switch.

9. On the front panel of the Interface box, press the Power switch.

    The Power indicator light turns on.

10. Move the Send Level control knob to 5.

11. Press the Test switch.

The test tone comes on.

12. While the test tone is on, move the Send Level control knob until the needle on the Voltage Unit meter reads 0 on the top scale.

13. Press the Test switch again and the test tone goes off.

14. On the rear panel of the Interface box, move the Send Level control knob to 0.

15. On the front panel of the Interface box, plug your headphones into the terminal located to the left of the Headphones volume control knob.

16. Connect the telephone line to the program telephone by pressing the Monitor Sat/Phone switch.

    The Phone indicator light turns on.

17. Press the Input Selector: Sat/Phone switch.

    The Phone indicator light turns on.

18. Press the Phone 1 switch.

    The Phone 1 indicator light turns on.

19. Ask the first assistant to use another phone to dial the number of the program telephone.

20. Answer the call in the normal manner. Confirm that the telephone operates normally.

21. Ask the caller to stay on the line while you perform some tests. Tell the caller that he/she will be hearing a tone while you perform the tests.

22. Connect the telephone to the program sound feed by pressing the Hybrid Receive switch on the front panel of the Interface box.

    The Hybrid Receive indicator light turns on.

23. Hang up the phone.

24. Press the Test switch on the Interface box to turn on the test tone.

25. While the test tone is on, move the Send Level control knob until the needle on the Voltage Unit meter reads 100 on the top scale.

26. The Send Level control knob on the front panel of the Interface box controls both the Voltage Unit meter and the sound level sent to the Washington, D.C. telephone line.

27. The Send Level control knob on the rear panel of the Interface box controls only the sound level sent to the Washington, D.C. telephone line.

28. Using a small screwdriver, turn the Balance (Hybrid) control screw to the left and right until the tone sound in your headphones is minimized.

29. Turn the Headphone volume control knob to the right to increase the tone and repeat the Balance (Hybrid) control screw adjustment. Find the setting that reduces the tone while any other setting makes the tone louder. Leave the Balance (Hybrid) control screw at the minimized tone setting. It will not

have to be reset unless you change to a different local telephone circuit for your program line.

30. Press the Phone 1 switch, tell your first assistant that you will now test the microphones, then press the Hybrid Receive switch again.

31. Ask your second assistant to be seated at microphone number 1 and put on the headphones.

32. Press the Phone 1 switch again to reconnect the program telephone line to the Interface box.

33. Press the Microphone Select MIC-1 switch.

   The Microphone Select MIC-1 indicator light turns on.

34. Press the Mode Select: Talk switch.

   The Talk indicator light turns on and the Talk light on the number 1 Microphone/Headphone box turns on.

35. Ask your microphone assistant to begin talking into his/her microphone.

36. Turn the Input MIC-1 control knob on the front panel of the Amplifier until the needle on the Voltage Unit meter moves to nearly 100 on the top scale on the loudest peaks but does not swing past 100 into the red area.

   You also may have to turn the Voltage Unit meter's Send Level control knob on the front panel of the Interface box to get the proper needle level.

37. The first assistant on the telephone should be able to hear the second assistant talking on the microphone.

38. Press the Mode Select Listen switch on the front panel of the Interface box.

   The Listen indicator light turns on.

39. The assistant at the microphone should hear the assistant on the telephone in his/her headphones and on the loudspeakers. He/she can adjust their headphone volume by turning the Headphones volume control knob on their Microphone/Headphone box.

40. When the assistant at the microphone wants to talk, press the Mode Select Talk switch on the Interface box.

41. When the assistant on the telephone wants to talk, press the Mode Select Listen switch on the Interface box.

   Do not use the Mode Select: Listen & Talk switch on the front panel of the Interface box. In this mode, the microphones are on and the receive circuit is feeding return sound to the loudspeakers. This creates an annoying echo effect.

42. Thank your assistant on the telephone for his/her assistance and ask that they hang up their telephone.

Test 2, TVRO System On and Receiving

In this test, confirm that your TVRO system is on and is receiving a program.

1. Press the Monitor Sat/Phone switch on the front panel of the Interface box.

2. The Sat indicator light turns on, and you hear the satellite sound on your headphones.

3. Press the Input Selector Sat/Phone switch on the front panel of the Interface box.

   The Sat indicator light turns on.

4. Press the Mode Select Listen switch on the front panel of the Interface box.

   You hear the satellite sound on the loudspeaker.

5. Turn the Input Line-1 control knob on the front panel of the Amplifier to adjust the loudspeaker volume.

6. Turn the Master Volume control knob setting on the front panel of the Amplifier to keep the loudspeaker volume below the howling point.

7. If howling cannot be controlled by turning the Master Volume control knob, set the B Howling Suppressor switch on.

Interactive Program Preparation

Use the following steps to prepare for an interactive program using the Sony Porta-Pac. Do this at least 1 hour before the program is scheduled to begin.

1. Prepare the studio.

2. Point the loudspeakers toward the audience and away from the microphones.

3. Turn on and test the interactive audio equipment:

   - Position the participant microphones about 6 inches from the person speaking and point each at a 45 ° angle at the speaker's mouth.

   - Have the coord line (Phone 1 switch) on the Interface box lighted and both telephones hung up and ready to receive calls from the Washington, D.C. studios.

4. Answer the coord line telephone when Washington, D.C. calls. The site program coordinator should stay on this line throughout the testing period and the interactive program.

5. Answer the program line phone when it rings. Confirm that you have a clear long distance line.

   If you do not have a clear long distance line, Washington will give you procedures.

   - Press the Hybrid Receive switch and the Input Selector Sat/Phone switch on the front panel of the Interface box; and

     The Hybrid Receive and the Phone indicator lights turn on.

   - Hang up the phone.

Washington, D.C. feeds the program sound to you on this line now to test that the line is working properly. During the actual program, this telephone return sound should be fed to the loudspeakers only if the better quality satellite sound is not available. Always use the Input Selector Sat/Phone switch with the Sat indicator light turned on to feed the satellite sound to the loudspeakers and VCRs.

6. When Washington, D.C. requests a test tone:

- Press the Test switch on the front panel of the Interface box and adjust the Voltage Unit meter Send Level control knob to bring the Voltage Unit meter needle to 0 on the top scale. Do not change the Send Level control knob on the rear panel of the Interface box unless directed by Washington, D.C.

7. When Washington, D.C. requests a microphone check:

- Have someone seated at one of the participant microphones;

- On the front of the Interface box, press the appropriate Microphone Select MIC switch and the Mode Select Talk switch; then signal the person to begin talking;

- Turn the corresponding Input MIC control knob on the front panel of the Amplifier to adjust the Voltage Unit Meter needle to a reading of 0 on the top scale;

- At the direction of Washington, D.C., push the Mode Select Listen switch and the Input Selector Sat/Phone switch on the front panel of the Interface box; and

  The Phone indicator light turns on and the telephone sound is returned to the loudspeakers.

- Press the Input Selector: Sat/Phone switch again and the Sat indicator light turns on.

  The satellite sound is returned to the loudspeakers.

Interactive Program Coordination

During interactive programming, the site program coordinator will tell you which of the participants will speak next.

- Press the appropriate Microphone Select MIC 1, MIC 2, MIC 3, or MIC 4 switch on the front panel of the Interface box;

  The corresponding Microphone Select MIC switch turns on.

- When the Washington, D.C. moderator finishes introducing your site by saying something such as; "We now go to (your site) for a question": Immediately push the Mode Select Talk switch on the front panel of the Interface box; and

  The Talk switch turns on at the participant's Microphone/Headphone box, cueing him/her to begin talking.

While the participant from your site is speaking, listen on your monitor headphones to the participant's voice coming back from the satellite. You will notice that the satellite sound is delayed a fraction of a second.

- When the participant has finished his/her question: Press the Mode Select: Listen switch on the Interface box after you hear his/her last word end on the satellite sound.

4	If you press the Listen switch immediately when the person in your studio finishes speaking, the last few words spoken will not be heard back through the loudspeakers because of the delay in satellite transmission.

Do not use the Mode Select Listen & Talk switch on the Interface box. In this mode the microphones are on and the receive circuit is also feeding return sound to the loudspeakers. This produces an annoying echo effect. Only use the Mode Select Talk switch to send and the Mode Select Listen switch to receive.

Using Harvard Elite Model SDD-1 Interactive Audio

Overview

The Harvard Elite is an audio system used during interactive programming. It is portable, easy to use, and inexpensive to purchase and to maintain. USIA is supplying the system to sites wishing to conduct interactive programming for the first time and as a replacement system for SONY Porta-Pac units that are no longer working.

Components

Figures 8.8 and 8.9 show the elements of the Harvard Elite Model SSD-1. The Model SSD-1 consists of the following components.

- The electronics box (Harvard Elite unit);

- Up to four microphones with detachable eight-foot cables;

- A power supply box; and

- A foam-lined carrying case.

Figure 8.8, Harvard Elite Model SSD-1 Side Panel
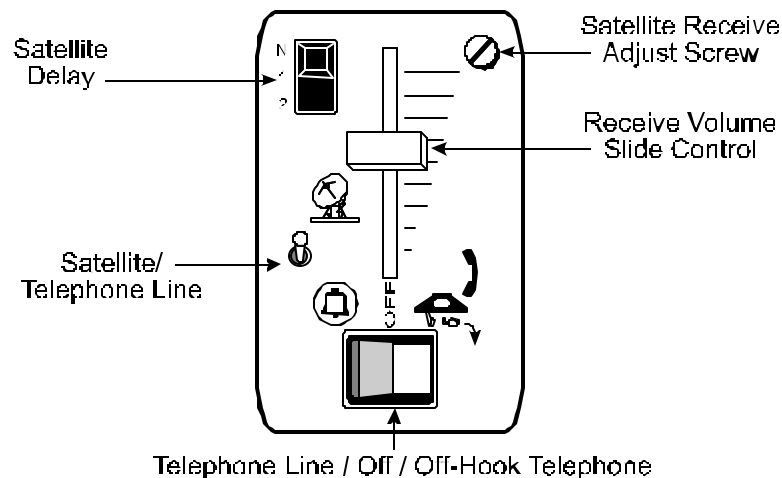
Figure 8.9, Harvard Elite Model SSD-1 Rear Panel
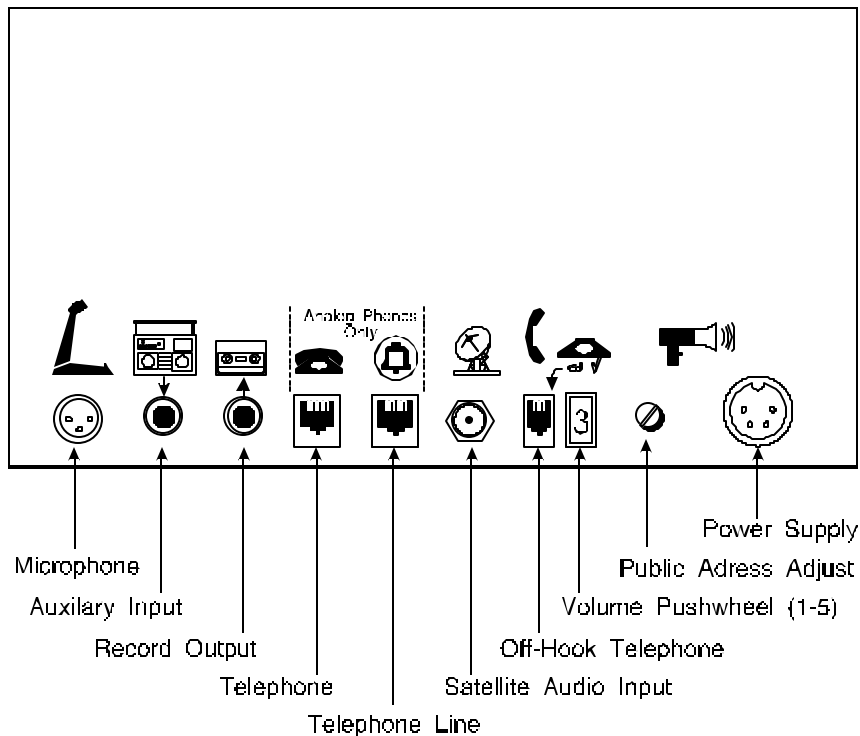
Hookup

All cable connections are made to the rear panel of the Harvard Elite. You will need the help of an assistant to test the connections.

The following symbols are used with the Harvard Elite procedures.

Use the first set of procedures if your telephone unplugs at the handset. Use the second set of procedures if your telephone handset is permanently connected to the telephone.

Procedures for Telephone that Unplugs at Handset

1. On the side panel of the Harvard Elite:

   • Move the 3-way switch marked /OFF/ to (right);

   • Move the Receive Volume slide control knob 1/3 of the way up from the bottom; and

   • Move the / switch to (down).

> This unit is wired for 110V AC operation. Do not plug this unit into any outlet until you verify that the outlet voltage is correct and that a proper circuit ground, other than the circuit ground used by the antenna, is used

2. On the rear panel of the Harvard Elite, connect the power supply box into the Power Supply terminal using the 4-pin, round cable plug.

3. Connect the power cord from the power supply box into a 110V AC wall outlet.

4. Connect the cable from the first microphone into the Microphone terminal and connect the cable from the second microphone into the back of the first microphone.

5. Place a telephone call to your assistant. When he/she answers, unplug the cord running from the telephone to the handset (telephone handset cord) at the handset.

6. Place the handset on the desk. Do not place it back into the cradle of the telephone.

7. Reconnect the telephone handset cord into the [icon] Off-Hook Telephone terminal on the rear panel of the Harvard Elite.

8. On the first microphone, press the switch bar, and speaking from 12 to 18 inches away from the microphone ask your assistant if he/she can hear you. Release the microphone switch bar to listen.

9. If he/she says that your volume is too low, move the Volume Pushwheel on the rear panel of the Harvard Elite to the next highest number (1 is the lowest microphone volume, 5 is the highest microphone volume).

10. Move the Receive Volume slide control knob on the side panel of the Harvard Elite to a comfortable listening level.

Procedures for Telephone That Is Permanently Connected

Follow these procedures if your telephone does not unplug at the handset and is permanently connected.

1. On the side panel of the Harvard Elite, move the 3-way switch marked [icon] /OFF/ [icon] to OFF (center).

2. Move the Receive Volume slide control knob 1/3 of the way up from the bottom.

3. Move the [icon] / [icon] switch to [icon] (down).

> This unit is wired for 110V AC operation. Do not plug this unit into any outlet until you verify that the outlet voltage is correct and that a proper circuit ground, other than the circuit ground used by the antenna, is used

4. On the back panel of the Harvard Elite, connect the power supply box into the Power Supply terminal using the 4-pin round cable plug.

5. Connect the power cord from the power supply box into a 110V AC wall outlet.

6. Connect the cable from the first microphone into the Microphone terminal and connect the cable from the second microphone into the back of the first microphone.

7. Connect the telephone line cable from the telephone into the ■ Analog Phone terminal.

8. Connect the telephone line cable from the wall into the 🔘 Analog Phone terminal.

9. Place a telephone call to your assistant. When he/she answers, move the 3-way switch marked 🔘 /OFF/ ☎ to 🔘 (left).

10. Place the handset back into the telephone cradle.

11. On the first microphone, press the switch bar, and speaking from 12 to 18 inches away from the microphone ask your assistant if he/she can hear you. Release the microphone switch bar to listen.

12. If he/she says that your volume is too low, move the Volume Pushwheel on the rear panel of the Harvard Elite to the next highest number (1 is the lowest microphone volume, 5 is the highest microphone volume).

13. Move the Receive Volume slide control knob on the side panel of the Harvard Elite to a comfortable listing level.

Use the first set of procedures if a videocassette receiver (VCR) will be used to record the interactive program. Use the second set of procedures if a VCR will not be used to record the interactive program.
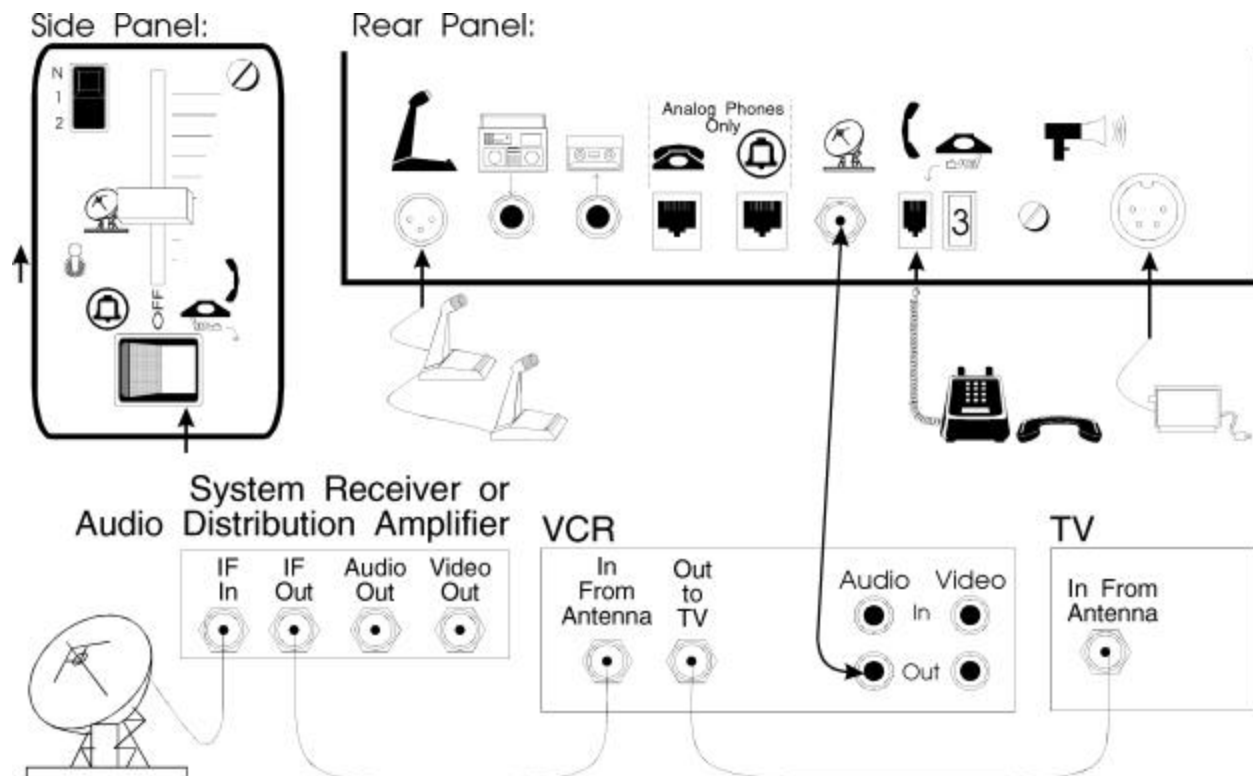
Recording Procedures with VCR

1. Connect a coaxial (coax) cable to the Satellite Audio input terminal on the rear panel of the Harvard Elite. Connect the other end of the coax cable to the Audio Out terminal on the back panel of the VCR.

2. On the side panel of the Harvard Elite, move the 📡/🔘 switch to 📡 (up).

Figure 8.10 illustrates the completed connections.

Figure 8.10, Harvard Elite Connected to VCR


Recording Procedures without VCR

1. Connect a coaxial (coax) cable to the Satellite Audio input terminal on the rear panel of the Harvard Elite. Connect the other end of the coax cable to the Audio Out terminal of the TVRO system receiver or audio distribution amplifier.

2. On the side panel of the Harvard Elite, move the / switch to (up).

Figure 8.11 illustrates the completed connections to a system receiver or audio distribution amplifier.

Figure 8.11, Harvard Elite Connected to System Receiver or Audio Distribution Amplifier
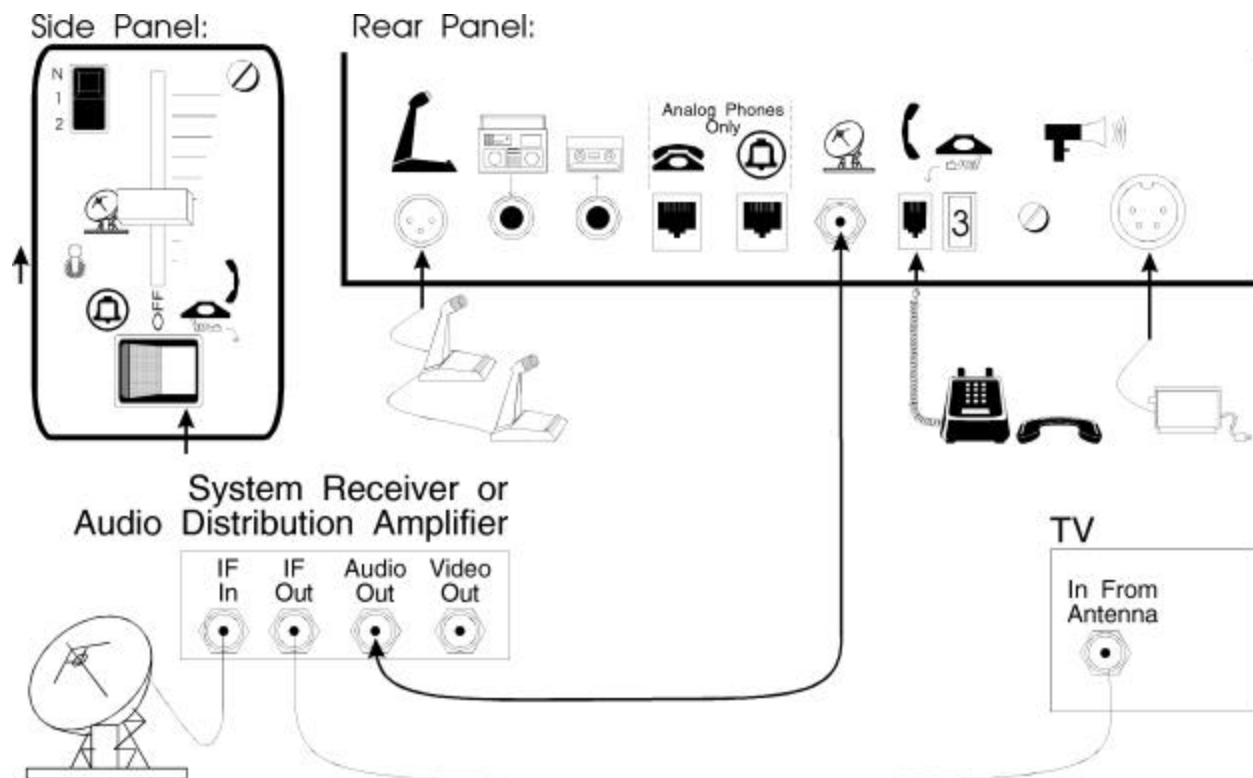
Tests

1. Turn on the TVRO system and select WORLDNET satellite signal on the system receiver.

2. On the Harvard Elite's side panel, move the 🛰/📞 switch to 🛰 (up).

3. Turn the TV video monitor speaker volume all the way down.

   The program audio is heard through the Harvard Elite front-panel speaker.

4. On the Harvard Elite's side panel, turn the Satellite Receive Adjust Screw clockwise until maximum signal strength is received, then move the Receive Volume slide control knob to a comfortable listening level.

Interactive Programming Preparation

Use the following steps to prepare for an interactive broadcast. Do this at least 1 hour before the broadcast is scheduled to begin.

1. Prepare the studio.

   Because the front panel of the Harvard Elite holds the speaker, point it toward the audience and away from the microphones. If an auxiliary loudspeaker is used, point it away from the microphones also.

2. Turn on and test the interactive audio equipment and the telephone.

- Position the participant microphones about 12 to 18 inches from the person speaking and point each at a 45° angle to the speaker's mouth;

- If you wish to hear the participant's voice over the public address loudspeaker, use a screwdriver to turn the Public Address Adjust knob on the rear panel of the Harvard Elite to increase/decrease the volume to the desired level; and

- Test the telephone.

If your telephone unplugs at the handset, follow the first set of procedures above for that

    or,

If your telephone handset is permanently connected to the telephone, follow the second set of procedures above for that.

3. Prepare to receive the phone call from Washington, D.C.

- If your telephone unplugs at the handset, unplug the phone from the Harvard Elite and reconnect the handset to the phone and replace it in the phone cradle; or

- If your telephone handset is permanently connected to the telephone, leave the telephone connected to the Harvard Elite; move the 3-way switch marked 📞 /OFF/ ☎ to 📞 (left); place the handset back into the telephone cradle; and move the Harvard Elite's 📡 / 📞 switch to 📞 (down).

4. Answer the telephone when Washington, D.C. calls.

If your telephone unplugs at the handset, unplug the handset cord from the handset and place the handset on the desk and reconnect the telephone handset cord into the ☎ Off-hook Telephone terminal on the rear panel.

    OR,

If your telephone handset is permanently connected to the telephone, place the handset back into the telephone cradle.

5. Press down the microphone switch bar, and speaking from 12 to 18 inches away from the microphone ask Washington, D.C. if they can hear you. Release the microphone switch bar to listen.

If they say that your volume is too low, move the Volume Pushwheel on the rear panel to the next highest number (1 is the lowest microphone volume, 5 is the highest microphone volume).

6. Move the Receive Volume slide control knob on the side panel to a comfortable listening level.

7. If you hear your last words to Washington, D.C. echoed out of the Harvard Elite's speaker (or auxiliary loudspeaker), move the Satellite Delay switch

knob on the side panel of the Harvard Elite from N to 1. If the echo continues, move the knob from 1 to 2.

Washington, D.C. feeds the program sound to you on the telephone line to confirm that the line is working properly.

8. Move the Harvard Elite's 🛰 / 🔘 switch on the side panel to 🛰 (up).

Watch the program video on the video monitor/TV and listen to the audio from the Harvard Elite's speaker to make sure that the picture matches the sound.

If the incoming satellite signal is discontinued or lost for some reason, move the 🛰 / 🔘 switch to 🔘 (down). The program's audio feed is broadcast through the Harvard Elite's speaker.

Interactive Programming Coordination

During interactive programming, when the Washington. D.C. moderator finishes introducing your site by saying something such as; "We now go to (your site) for a question", immediately signal the selected participant to push his/her microphone bar and begin speaking.